R E P O R T R E S U M E S

ED 012 969 EA 000 760

FAMILY INCOME AND THE CHARACTERISTICS OF COLLEGE-BOUND STUDENTS.

BY- BAIRD, LEONARD L.
AMERICAN COLLEGE TESTING PROGRAM, IOWA CITY, IOWA

REPORT NUMBER ACT-RR-17 PUB DATE FEB 67
EDRS PRICE MF-$0.25 HC-$1.28 32P.

DESCRIPTORS- *LOW INCOME GROUPS, *COLLEGE STUDENTS, *FAMILY INCOME, SOCIOECONOMIC STATUS, *STUDENT CHARACTERISTICS, HIGH SCHOOL GRADUATES, STUDENT COLLEGE RELATIONSHIP, *EDUCATIONAL OBJECTIVES, ACADEMIC PERFORMANCE, SOCIOECONOMIC BACKGROUND, EDUCATIONAL PLANNING, CAREER CHOICE, FINANCIAL SUPPORT, IOWA CITY,

A COMPARATIVE SOCIOECONOMIC ANALYSIS OF 18,378 PROSPECTIVE COLLEGE STUDENTS (10,073 MEN AND 8305 WOMEN) TABULATES PERCENTAGES FOR THE RELATIONSHIP BETWEEN STUDENTS WITH DIFFERENT FAMILY INCOMES AND ACADEMIC ACHIEVEMENT, FARM OR RURAL HOMES, MARITAL OR DATING STATUS, COLLEGE GOALS, REASONS FOR COLLEGE CHOICE, EXPECTATIONS CONCERNING COLLEGE, HIGHEST DEGREE SOUGHT, CHOICE OF MAJOR FIELD, VOCATION, AND VOCATIONAL ROLE. THE SUBJECTS WERE A THREE PERCENT REPRESENTATIVE SAMPLE OF THE POPULATION OF APPROXIMATELY 612,000 STUDENTS TESTED BY ACT ON NATIONAL TEST DATES BETWEEN NOVEMBER 1, 1964, AND OCTOBER 31, 1965. TESTS AND OTHER METHODS USED IN THE EVALUATION ARE DESCRIBED, VARIABLES ARE EXPLAINED, AND FINDINGS ARE BRIEFLY REVIEWED. CONCLUSIONS SUPPORT THE HYPOTHESIS THAT SOCIAL CLASS IS A PRIMARY DETERMINANT OF COLLEGE CHOICE AND VOCATIONAL ORIENTATION. EMPHASIS IS PLACED ON DEVELOPING A STUDENT FINANCIAL AID PROGRAM TO HELP LOW INCOME STUDENTS TO ATTEND COLLEGE, WIDEN THEIR CHOICE OF INSTITUTIONS, AVOID EXCESSIVE WORK LOADS, AND PLAN FOR EDUCATIONAL ATTAINMENT COMMENSURATE WITH THEIR ABILITIES. THIS DOCUMENT APPEARS IN "ACT RESEARCH REPORTS," NUMBER 17, FEBRUARY, 1967, AND IS ALSO AVAILABLE AS ADI DOCUMENT NO. 9378 FOR $2.00 MF, $3.75 PHOTOCOPY FROM THE AMERICAN DOCUMENTATION INSTITUTE, ADI AUXILIARY PUBLICATIONS PROJECT, PHOTODUPLICATION SERVICE, LIBRARY OF CONGRESS, WASHINGTON, D.C. 20540. (JK)

ED012969

RESEARCH REPORTS

February, 1967 No. 17

FAMILY INCOME AND THE CHARACTERISTICS OF COLLEGE-BOUND STUDENTS

Leonard L. Baird

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

EA 000 760

Published by Research and Development Division • American College Testing Program • P 168, Iowa City, Iowa 52240

Summary

The family income of 18,378 students applying to college was related to their ability, grades, non-academic achievements, reasons for college choice, background, college goals, degree plans, expectations concerning college, and choice of major, vocation, and vocational role. Students from low income families, when compared to students from high income families, had lower ability test scores, but higher high school grades. Low income students were more likely to plan to attend colleges which had low tuition and were close to their homes. Low income students were more likely to expect to work, live at home, choose majors and vocations in education or social areas and emphasize vocational training as a goal in college. Low income students were less likely to expect to live in fraternities or sororities, participate in student government, choose majors or vocations in administrative fields, or plan any degree beyond the bachelor's.

Family Income and the Characteristics of College-Bound Students

Leonard L. Baird

American College Testing Program

Social class and family income have been shown to influence opinions, attitudes, health, and style of life. In higher education, researchers have shown that social class also influences the choice of college and major field (Astin, 1964a; Davis, 1964). Income and social class are often related to academic success. Studies indicate for example, that students from lower income backgrounds are likely to have lower aptitude test scores and achieve lower grades. (See the summaries of Brookover, 1955, and Havighurst and Neugarten, 1957, and the studies by Astin, 1964a, 1964b). Income also affects plans for college attendance and choice of occupation (Werts, 1966a, 1966b). In fact, family income seems to be one of the most influential factors in the social background of college-bound students. It is, consequently, the subject of this report.

There are several reasons for studying family income. First, income is a critical factor in many choices a student will make. His financial status will affect the tuition he can pay and, therefore, the kind of college he can attend. It will affect the kind of activities he can engage in and whether he will join a fraternity. It will also influence the careers that are feasible for him; for example, whether

he can afford to attend medical school. In these ways, family income is probably a better predictor of choices than other information about students' social class. Secondly, family income is a relatively objective and clear sign of the social status of a family. Income covers a wide range of objective differences among families so that researchers may study a broad range of families and, at the same time, make fine distinctions among families. And thirdly, while students may have difficulty describing their fathers' occupation or education, they can usually provide a simple and direct estimate of their family income.

The comparison of students with differing family income involves many variables--ability, grades, achievement, choices of major and vocation, plans for college, and goals. Studying these variables may thus lead to a greater understanding of the effects of family income. Such understanding may help not only sociologists, but also college counselors who wish to anticipate some of the problems faced by students from varying backgrounds.

This study, a description of college-bound students with different family incomes, grew out of the research of the American College Testing Program, which administers tests of academic potential to college-bound students. The ACT battery includes tests in English, Mathematics, Social Science and Natural Science; reports of high school grades; and the Student Profile Section (American College Testing Program, 1965). The Student Profile Section (SPS) is a short questionnaire which includes information about students'

vocational choices, degree plans, goals in attending college, reasons for choosing a college, and background. Its purpose is to "provide colleges with valuable information for admissions, educational planning and research." A recent book of norms has been prepared for the SPS to aid educators "in describing and evaluating institutional and student characteristics" (American College Testing Program, 1966).

Method

The Sample

The subjects were a three-percent representative sample of the population of approximately 612,000 students tested by ACT on national test dates between November 1, 1964 and October 31, 1965. This sample was drawn by taking every 33rd, 67th and 100th student on the master tape for each testing date. By this procedure, a sample of 18,378 students was obtained, of whom 10,073 were men, and 8,305 were women. These students completed the Student Profile Section of the ACT battery of tests, as part of the regular assessment on the national testing dates, and are representative of students who take the battery. Students with different family incomes were compared in several areas: ability; grades and achievement; reasons for college choice; background; college goals; degree plans; expectations concerning college; and choice of major, vocation, and vocational role.

Academic Potential and Grades

The ACT tests yield scores in the following: English, Mathematics, Social Studies, and Natural Science. The scores for each student are

converted into ACT standard scores with a mean of 20 and a standard deviation of approximately 5, based on college-bound high school seniors (American College Testing Program, 1965, 1966).

High school grades are based on self-report in each of four areas: English, Mathematics, Social Studies, and Natural Science. Scores are assigned to the grades, so that A = 4, B = 3, C = 2, D = 1, and F = 0. Research by Davidsen (1963) and Holland and Richards (1965) indicates that self-reported high school grades correspond closely to grades on official transcripts.

Non-Academic Achievement Scales

The checklists of extracurricular activities are the same as those used by Holland and Richards (1966), and yield scores in the following areas: Science, Art, Writing, Leadership, Music, and Dramatic Art. The score on each scale is simply the number of accomplishments checked. Students with high scores on any of these scales presumably have attained a high level of accomplishment which requires complex skills, long term persistence, or originality. In several studies, these scales have shown reliabilities ranging from .65 to .84.

Reasons for College Choice

Students were asked to rate 22 items concerning influences on their choice of college. Each student rated each influence according to the degree to which it had affected his choice. The statistic used here is the percentage of students in each classification who rated the

influence as "a major consideration." The influences fall into four general areas:

Atmosphere and reputation--intellectual atmosphere, emphasis on religious and ethical values, good faculty, etc.

Facilities--a special curriculum, presence of fraternities and sororities, etc.

Personal influence--advice of parents, friends going, etc.

Other considerations--size, low cost, location, etc.

Background

Students were asked to supply such background information as the location of their home, their age, family income, and marital or dating status. Those students who considered family income or dating status confidential could so indicate without being required to give any other response.

Expectations Concerning College

Students were asked about such expectations as whether they would work, where they would live, and what activities they planned to participate in during college. The activities included music, writing, student government, science clubs, debate, acting, departmental clubs, and intercollegiate and intramural athletics.

Most Important Goal in Attending College

Students were simply asked to choose their most important goal in attending college from the following alternatives:

To learn how to enjoy life

To develop my mind and intellectual abilities

To secure vocational or professional training

To make a desirable marriage

To earn a higher income

To develop moral standards

To become a cultured person

To develop my personality

To develop a satisfying philosophy

None of these

Choice of Major, Vocation, and Vocational Role

Students were asked to choose from 86 possible fields the one which best described their planned college major and then, from the same list, to indicate their planned vocation. The choices of educational major were coded into nine areas: Social, religious, and educational fields; administrative, political, and persuasive fields; business and finance fields; scientific fields; engineering, agriculture and technical fields; medical fields; arts and humanities; other; and undecided. The choices of vocation were coded into the same categories with the addition of the career of "housewife." Students also indicated the main role they expected to play in their future vocation, choosing among the roles of researcher-investigator, teacher-therapist, administrator-supervisor, promoter-salesman, practitioner-performer, none of these, two or more roles, and undecided or don't know.

Degree Plans

Finally, students indicated the highest level of education they expected to complete, choosing from the following: Vocational or technical program or junior college degree, bachelor's degree or equivalent, one or two years of graduate or professional study (M.A., M.B.A., etc.), doctor of philosophy (Ph.D.), doctor of medicine (M.D.), doctor of dental surgery (D.D.S.), bachelor of laws (L.L.B.), bachelor of divinity (B.D.), or "other."

Statistics

The statistics used in this report are simple descriptive statistics--averages, percentages and distributions. No tests of significance were applied to these data for several reasons. Little information would have been gained from tests of significance because the large N would have caused most comparisons to be significant--even small differences. Further, the distributions of percentages and other figures are typically self-explanatory. The reader can usually see when a particular difference is large enough to have some practical implication. Some information, such as reasons for college choice, is rather complex and is best interpreted as a whole. Finally, as Hays (1963) and others have pointed out, it is often hazardous to use multiple comparisons on a set of data. Because of statistical problems, one really has no way of telling how many of the significant results are due to chance alone or to some results dictating others.

Results

General

Annual family income ranged widely from "less than $5,000" to "25,000 and over." In terms of the national distribution of family incomes, this represents a range from the bottom third of incomes to the top one or two percent. The number and percentage of students who reported each level of income is shown in Table 1. About a quarter of the students did not know their families' income, and another 6.2 percent considered this information confidential. The approximate median income of those who did report an income is $8,500. The figures also suggest that many women (about 36 percent) do not know what their families' income is.

Table 1

Distribution of Family Income

	Below $5,000	$5-7,499	$7,5-9,999	$10-14,999	$15-19,999	$20-24,999	$25-Above	Confi-dential	Don't know
N	1703	3703	2792	2647	728	307	308	1131	4824
% of Total	9.4	20.4	15.4	14.6	4.0	1.7	1.7	6.2	26.6
% of Male Sample	9.0	22.6	17.6	16.4	4.7	1.7	1.9	6.1	18.4
% of Female Sample	9.5	17.1	12.2	11.9	3.1	1.6	1.3	6.2	35.9

Note. --There were also 235 students who did not respond to this item.

Ability and Academic Performance

The ACT test scores of students classified by family income are presented in Table 2. The high school grades of students with differing

family incomes are also shown in Table 2. While the differences in means are small, the results are generally consistent. In each case, the ACT mean scores for the students with family income below $5,000

Table 2

Comparison of Students with Different Family Incomes on ACT Tests and High School Grades

Variable	Below $5,000	$5-7,499	$7,5-9,999	$10-14,999	$15-19,999	$20-24,999	$25-Above	Confidential	Don't know
ACT English									
Mean	18.4	18.8	19.1	19.3	18.9	19.2	19.3	18.5	18.9
S.D.	5.3	4.9	4.9	4.9	5.0	5.1	4.9	5.0	5.1
ACT Mathematics									
Mean	19.2	20.2	20.8	20.9	20.2	20.1	20.8	19.2	18.8
S.D.	6.7	6.4	6.4	6.3	6.5	7.1	6.6	6.8	6.6
ACT Social Studies									
Mean	20.2	20.8	21.5	21.9	21.5	21.1	21.7	20.7	20.1
S.D.	6.6	6.2	6.0	5.9	6.1	6.6	6.2	6.4	6.4
ACT Natural Science									
Mean	19.9	20.8	21.3	21.5	21.0	20.6	21.1	20.1	19.9
S.D.	6.3	6.0	5.9	5.7	5.9	6.3	5.9	6.2	6.0
ACT Composite									
Mean	19.6	20.3	20.8	21.0	20.5	20.4	20.9	19.7	19.5
S.D.	5.4	5.0	4.9	4.8	5.0	5.4	5.0	5.2	5.1
High School Grades									
English	2.82	2.68	2.66	2.61	2.59	2.59	2.62	2.58	2.72
Mathematics	2.53	2.40	2.35	2.32	2.19	2.32	2.32	2.23	2.34
Social Studies	2.87	2.79	2.78	2.75	2.68	2.70	2.78	2.68	2.73
Natural Science	2.66	2.51	2.47	2.43	2.36	2.43	2.45	2.38	2.48
Total									
Mean	2.72	2.60	2.57	2.53	2.45	2.51	2.55	2.47	2.57
S.D.	.73	.72	.73	.70	.69	.74	.68	.73	.70

are the lowest reported. At the same time the average grades for these students are the highest reported. These results imply that students

from low income homes who aspire to college are "over-achievers." The highest income group did not have the highest ACT test scores or the lowest grades. The $10-14,999 group had, in each case, the highest ACT test scores, while the $15-19,999 group had the lowest grades.

Table 3

Comparison of Students with Different Family Income on Number of High School Achievements

High School Achievements	Below $5,000	$5-7,499	$7,5-9,999	$10-14,999	$15-19,999	$20-24,999	$25-Above	Confi-dential	Don't know
Science									
Rare (4-8)	3.7	5.5	6.2	6.3	7.1	8.8	11.8	6.9	4.9
Moderate (1-3)	32.1	32.7	34.3	35.4	36.2	29.6	38.2	35.3	28.1
None (0)	64.2	61.8	59.5	58.2	56.6	61.7	50.0	57.7	68.1
Art									
Rare (4-8)	3.0	3.2	3.1	3.4	4.7	4.9	5.5	5.4	3.3
Moderate (1-3)	23.1	22.2	24.5	26.2	28.2	33.9	35.3	26.6	24.9
None (0)	74.1	74.8	72.4	70.4	67.1	61.2	59.3	68.0	71.9
Writing									
Rare (4-8)	4.3	4.3	4.3	4.1	5.7	6.1	6.0	5.8	4.1
Moderate (1-3)	41.8	41.8	42.1	45.5	44.9	48.6	48.6	47.0	42.8
None (0)	54.1	53.5	53.7	50.3	49.4	45.2	45.5	47.1	53.0
Leadership									
Rare (5-8)	12.7	13.6	14.9	15.5	16.5	20.8	21.0	13.2	12.3
Moderate (1-4)	66.6	64.2	64.9	63.6	65.2	63.9	65.7	67.9	66.2
None (0)	20.8	22.4	20.1	20.9	18.3	15.3	13.2	18.9	21.6
Music									
Rare (4-8)	13.7	15.1	15.9	16.2	19.3	20.6	17.3	16.3	16.7
Moderate (1-3)	37.8	35.9	35.2	37.3	40.2	38.1	43.8	40.0	42.4
None (0)	48.6	49.0	49.0	46.7	40.4	41.3	38.8	43.7	40.9
Dramatic Art									
Rare (4-8)	10.7	9.3	8.9	8.3	10.1	13.7	9.7	10.2	9.1
Moderate (1-3)	48.2	45.9	42.5	43.5	45.1	46.2	44.8	46.7	45.1
None (0)	41.0	44.9	48.5	48.2	44.9	40.1	45.6	43.2	45.9

Non-Academic Achievements in High School

The non-academic achievements of students are shown in Table 3. The content of these achievement scales has been described elsewhere (Holland and Richards, 1965). The percentage of students who have no achievements in each area is shown first. The percentage who have between one and three achievements is shown second, and the percentage who have four or more achievements is shown next, except in leadership achievement, in which the percentage having five or more achievements is shown. These three levels are arbitrary intervals taken to show no achievement, moderate to high achievement, and rare achievement, respectively.

It is clear from the figures in Table 3 that in every case but dramatic art the number of achievements increases with family income. The differences are generally small, but the trend is clear. Only about a third of the lowest income group had any achievement in science, and about four percent showed "rare" achievement. On the other hand, about half of the highest group had at least one achievement in science, and about twelve percent showed "rare" achievement. About fifteen percent more students in the wealthiest group than in the lowest income group had one or more achievements in art, and about ten percent more had one or more achievements in writing. High income groups show somewhat more "rare" achievement in leadership and music, and somewhat larger proportions with at least one achievement in leader-ship and music.

Background Characteristics

The percentages of students in each income category with various background characteristics are shown in Table 4. Nearly half of the students in the below $5,000 group came from homes on farms or in open country. Only about one student in eight in the

Table 4

Comparison of Students with Different Family Incomes on Background Characteristics

	Below $5,000	$5-7,499	$7,5-9,999	$10-14,999	$15-19,999	$20-24,999	$25-Above	Confi-dential	Don't know
Percent Whose Home is on Farm, or in Open Country	47.8	29.9	20.5	15.4	15.9	14.5	12.5	19.0	
Marital or Dating Status									
Engaged	1.4	1.5	1.1	1.2	1.5	1.6	1.6	1.5	1.1
Pinned, Steady	12.9	15.8	15.7	15.9	17.2	17.4	17.9	12.9	14.6
Date Same Person	16.1	16.9	17.1	17.4	17.5	15.7	18.2	13.2	17.6
Date More Than One Person	42.9	46.6	49.1	50.7	51.3	54.4	50.8	43.0	48.9
Don't Date	15.9	12.1	9.2	8.1	5.0	5.2	4.9	6.3	11.5
Divorced	0.5	0.2	0.1	0.2	0.1	0.7	0.3	1.2	0.1
Consider This Confidential	6.9	4.6	5.7	4.4	5.8	4.3	2.9	18.8	5.5

highest income group came from homes on farms or open country. The difference between the lowest income group and the next lowest is nearly 20 percent. This fact suggests that low income students may face unusual adaptation problems in college.

Students from low income homes are more likely to say they don't

date; they are less likely to be pinned or to be going steady or to date more than one person. Low income students are also more likely to consider this information confidential. Taken together, these differences suggest that low income students have less dating experience and, on the average, are less psychosexually involved.

Goals in College

The percentages of students rating each goal as their most important goal in attending college are shown in Table 5. Students from wealthier homes are relatively more often concerned with developing their intellect, while students from less wealthy homes are more concerned with vocational and professional training. These two goals are given the most importance by both groups however, and most students would probably say they would try to combine both goals

Table 5

Comparison of Students with Different Family Incomes on Most Important Goals in Attending College
(Percentage Choosing Each Goal as the "Most Important" in Attending College)

Goal	Below $5,000	$5-7,499	$7,5-9,999	$10-14,999	$15-19,999	$20-24,999	$25-Above	Confi-dential	Don't know
Enjoy Life	0.6	0.5	1.0	0.7	0.7	1.0	0.6	0.1	0.6
Develop Intellect	30.4	31.5	32.8	35.4	38.1	35.6	39.9	40.2	33.9
Vocational-Professional Training	53.4	53.5	51.6	49.6	46.9	45.4	41.9	43.7	52.8
Marriage	1.1	1.5	1.0	1.2	0.7	1.0	1.6	1.3	0.8
Earn Higher Income	8.4	8.3	8.0	7.3	6.5	8.5	8.8	7.4	5.9
Morals	0.6	0.2	0.2	0.2	0.1	0.0	0.3	0.2	0.2
Cultured Person	1.8	1.5	2.1	2.3	2.8	5.6	3.2	2.0	2.5
Develop Personality	0.8	0.5	0.8	0.7	1.1	0.3	1.0	0.8	0.6
Philosophy	1.4	1.1	1.2	1.3	1.5	1.6	1.3	1.2	0.9
None of These	1.5	1.4	1.2	1.3	1.7	1.0	1.3	3.1	1.8

in their careers. Students from wealthier homes also give slightly more importance to "becoming a cultured person."

College Choice

The percentages of students in each income group who said they had given "major" consideration to various reasons for their choice of college are shown in Table 6. The largest differences occur in the last group of reasons called "Other Considerations." Students from low income families are more likely to have given "major consideration" to the college's low cost, its closeness to their home, and, for many, its offer of a scholarship or financial aid. Students from high income homes were more likely to have given major consideration to the social opportunities available, the presence of fraternities or sororities, and the quality of the faculty ("Good faculty"). Students from low income homes were more likely to have been influenced by a high school teacher and less likely to have been influenced by a campus tour or visit.

Expectations about College

The expectations of students concerning their housing, cars, and work at college are shown in Table 7. Almost none of the students in the lowest income group expect to live in a fraternity or sorority, while more than a sixth of the students in the highest group expect to do so. About twice as many students in the lowest as in the highest income group expect to live at home while attending college.

Income affects the expectation of bringing a car to campus.

Table 6

Comparison of Students with Different Family Incomes on Reasons for College Choice

Percent Who Indicated Reason for College Choice was "Major"	Below $5,000	$5-7,499	$7,5-9,999	$10-14,999	$15-19,999	$20-24,999	$25-Above	Confi-dential	Don't know
Atmosphere Reputation									
Intellectual Atmosphere	43.4	41.9	42.0	44.3	47.2	44.9	43.5	46.2	43.3
Religious Emphasis	26.9	24.7	21.4	21.5	22.6	23.8	19.3	24.5	26.1
Progressive Outlook	30.6	29.2	27.5	28.0	30.9	23.6	26.4	33.5	27.9
Social Opportunities	32.3	34.2	36.7	38.8	41.3	40.9	45.1	36.2	38.5
Good Faculty	60.0	63.6	64.0	66.0	71.2	67.7	76.1	68.9	64.6
National Reputation	40.8	39.6	42.0	41.0	45.5	48.1	45.2	42.8	43.8
High Scholastic Standards	60.4	62.7	62.6	62.6	64.2	59.4	68.6	65.9	63.6
Facilities									
Special Curriculum	53.6	56.4	57.9	57.4	59.2	56.1	55.8	58.7	58.5
Good Facilities	42.1	40.9	41.1	41.8	44.8	32.7	44.2	44.6	42.3
Good Athletic Program	15.1	17.8	19.0	18.0	19.1	15.9	20.1	15.5	15.2
Has Fraternities & Sororities	4.5	5.6	6.6	7.6	10.3	8.7	14.0	8.1	7.3
Personal Influences									
Advice of Parents	36.2	37.0	36.3	35.2	38.4	28.8	34.3	36.8	39.4
Advice of High School Teacher	28.6	27.9	26.3	22.4	26.5	18.4	16.9	23.6	24.0
Advice of H.S., College Counselor	38.7	37.7	36.5	33.7	37.6	33.8	32.9	34.6	34.0
College Admission Counselor	27.1	28.8	28.7	29.9	34.1	29.1	30.6	32.4	30.3
Friends Going	8.5	9.7	9.3	7.8	8.7	7.3	8.6	7.2	8.4
Campus Tour	28.9	31.2	31.6	34.0	38.6	37.2	39.7	34.2	35.6
Other Considerations									
Financial Aid Offer	31.3	24.3	21.6	16.8	12.7	11.5	9.0	17.9	21.3
Low Cost	53.2	48.3	38.9	31.9	21.3	16.9	12.3	33.2	35.7
Size	22.0	22.9	25.6	27.2	27.0	27.2	34.3	27.2	28.0
Location	57.5	55.8	52.3	53.7	51.2	43.6	50.2	55.1	54.0
Close to Home	46.2	43.6	38.3	34.8	29.9	24.4	22.1	38.2	37.3

About a third of the lowest income students anticipate bringing a car to campus, compared to about half of the highest income students.

Table 7

Comparison of Students with Different Family Incomes on Expectations Concerning College

	Below $5,000	$5-7,499	$7,5-9,999	$10-14,999	$15-19,999	$20-24,999	$25-Above	Confi-dential	Don't know
Housing Expectations									
Dormitory	51.3	50.3	51.3	51.5	54.8	54.8	51.1	50.9	58.1
Fraternity or Sorority	1.3	2.7	4.3	6.5	12.9	11.8	17.6	6.6	4.9
College Apartment	2.4	2.1	2.0	2.4	3.2	2.3	4.6	1.4	1.9
Off Campus Apartment	6.3	5.3	5.1	4.9	4.7	5.2	8.5	5.2	3.7
Off Campus Room	3.7	3.1	2.6	1.9	1.4	1.3	1.3	3.5	2.0
At Home	35.1	36.5	34.7	32.8	23.1	24.6	16.9	32.4	29.5
Percent Who Expect to Bring a Car to Campus	32.3	37.0	39.2	40.4	42.6	43.6	47.7	38.4	30.5
Percent Who Expect to Work	74.9	68.3	62.1	54.2	46.6	39.9	36.5	51.3	54.9

Students from low income families are much more likely than students from high income families to expect to work during college. Nearly 75 percent of the lowest income group expect to work, while a third of the highest income group expect to work. Students from low income families probably must work while students from high income families work only when they choose to.

The expected activities are shown in Table 8. Most students of

all income levels plan to participate in departmental clubs and intramural athletics. Somewhat greater proportions of high income students plan to participate in intercollegiate athletics and student government.

Table 8

Comparison of Students with Different Family Incomes on Expected Areas of Participation in College (Percent Who Expect to Participate)

Activity in Which the Student Expects to Participate	Below $5,000	$5-7,499	$7,5-9,999	$10-14,999	$15-19,999	$20-24,999	$25-Above	Confi-dential	Don't know
Athletics--Intercollegiate	29.8	32.0	33.7	33.9	38.8	37.6	38.6	31.2	27.8
Music	32.1	31.4	30.3	32.6	33.6	38.4	31.6	34.6	37.6
Writing	33.8	31.7	30.5	31.8	36.6	32.5	39.7	35.2	31.9
Student Govt.	47.2	49.8	48.9	51.9	53.3	53.9	55.4	49.0	48.5
Science Clubs	33.9	34.5	33.8	31.9	31.3	29.9	32.6	32.3	26.4
Debate	24.6	20.6	18.9	19.9	22.2	22.7	23.5	24.4	18.3
Acting	25.1	24.5	24.2	26.8	27.5	32.6	28.1	30.5	29.1
Dept. Clubs	84.4	85.3	85.3	85.6	87.3	82.7	86.3	83.4	86.5
Athletics Intra.	51.0	56.4	58.8	60.9	61.0	56.9	66.0	52.6	49.3

Educational and Vocational Plans

The probable majors of students and their choice of vocation and vocational role are shown in Table 9. There is a tendency for greater income to be associated with less frequent choice of occupations classified as social, religious, or educational, and with more frequent choice of occupations classified as administrative, political, or persuasive.

Similar trends occur in the choice of major. The more frequent choice of social, religious, and educational occupations among less affluent students probably leads to their greater choice of the vocational

Table 9

Planned Major, Vocational Choice, and Preferred Vocational Role
(Percent Choosing Each Area or Role)

	Below $5,000	$5-7,499	$7,5-9,999	$10-14,999	$15-19,999	$20-24,999	$25-Above	Confidential	Don't know
Major Field Choice									
Social, Religious, Educational	27.1	24.4	22.4	22.1	18.8	22.5	17.2	22.3	28.4
Administrative, Political, & Persuasive	6.7	9.3	10.5	13.4	16.2	17.3	18.2	11.5	7.6
Business & Finance	7.3	8.2	7.9	8.4	8.8	6.5	7.8	8.2	8.0
Scientific	7.7	7.8	8.9	8.6	5.5	5.9	7.1	6.2	5.9
Engineering, Agriculture, Technical	13.3	14.1	13.7	12.5	13.6	11.1	12.7	9.9	8.1
Medical	9.4	9.7	10.1	9.6	12.1	9.8	13.3	11.3	12.1
Arts & Humanities	8.7	8.4	9.9	9.6	10.6	10.1	10.1	10.5	10.4
Other	1.6	1.3	1.8	1.7	1.7	1.3	1.6	2.7	2.2
Undecided	18.2	16.7	14.6	14.2	12.7	15.4	12.0	17.5	17.3
Vocational Choice									
Social, Religious, Educational	24.6	22.2	20.7	20.9	17.9	17.6	14.4	19.7	26.6
Administrative, Political, & Persuasive	6.3	7.2	8.2	11.2	11.2	11.6	13.4	10.6	6.1
Business & Finance	6.4	7.4	7.2	6.9	7.2	7.0	8.5	7.0	6.9
Scientific	4.7	4.2	4.7	4.5	1.7	2.7	6.2	3.2	2.6
Engineering, Agriculture, Technical	10.2	11.5	11.7	10.3	11.4	8.6	10.5	8.3	6.3
Medical	9.1	10.0	10.0	9.5	12.4	11.0	12.8	10.5	11.7
Arts & Humanities	7.0	6.2	7.4	6.7	8.1	8.6	6.2	6.8	6.1
Housewife	1.2	0.9	0.9	0.9	0.3	0.3	1.0	1.2	1.6
Other	6.9	6.8	7.9	8.1	9.4	8.6	9.8	9.5	8.1
Undecided	23.6	23.6	21.3	20.9	20.4	23.9	17.0	23.3	24.0
Vocational Role Choice									
Researcher	7.7	9.6	9.8	9.6	8.8	7.4	9.3	7.2	5.7
Teacher or Therapist	26.7	24.8	23.4	21.2	16.4	21.1	16.7	20.4	30.8
Administrator	10.0	9.0	10.4	11.2	12.2	10.7	14.7	8.9	5.3
Promoter or Salesman	2.7	2.8	3.0	3.8	5.7	7.0	6.0	4.0	2.8
Practitioner	15.5	16.7	19.0	21.7	24.2	19.4	20.7	18.2	16.5
None of Above	13.0	11.9	13.0	11.3	12.3	15.1	13.3	15.5	12.9
Two Roles or More	3.1	4.1	3.7	4.2	4.9	3.7	3.3	4.6	3.2
Don't Know, Undecided	21.4	21.0	17.4	17.0	15.4	15.7	16.0	21.2	22.8

role of teacher or practitioner. These results are similar to those of Werts (1966a, 1966b).

The educational plans of the students in the sample are shown in Table 10. About twice as many students in the lowest income group

Table 10

Educational Plans--Highest Degree Sought
(Percent Within Each Group Choosing Each Degree Goal)

Educational Plans	Below $5,000	$5-7,499	$7,5-9,999	$10-14,999	$15-19,999	$20-24,999	$25-Above	Confi-dential	Don't know
College But Less Than B.A.	19.4	17.6	14.9	12.8	12.9	9.8	10.2	15.9	20.1
B.A.	48.2	47.8	46.6	44.7	44.3	46.1	36.4	43.8	48.5
M.A.	20.4	22.3	25.8	26.9	23.5	23.9	27.5	22.9	19.2
Ph.D.	3.7	3.0	3.8	4.6	5.1	6.5	4.9	3.7	2.0
M.D.	1.9	2.6	3.1	3.5	4.7	3.6	7.5	3.9	2.4
D.D.S.	0.4	0.8	0.8	1.6	2.5	1.0	2.0	1.0	0.8
L.L.B.	1.3	1.8	2.1	3.0	3.6	4.2	7.5	3.0	1.4
B.D.	0.5	0.4	0.3	0.4	0.6	0.7	0.3	0.2	0.3
Other	3.4	2.8	2.4	2.2	2.5	3.9	3.0	5.1	4.5
Total Percent Professional Level Degree	7.8	8.6	10.1	13.1	16.5	16.0	22.2	16.8	6.9

intend to stop their education short of a bachelor's degree (19.4 percent) than students in the highest income group (10.2 percent). If we add all those occupations which require professional training or education beyond

a Masters degree, the results are more striking. While only 7.8 percent of the students in the lowest income group plan some advanced or professional training, nearly three times that proportion (22.2 percent) in the highest income group plan advanced training. This difference is chiefly due to the greater choice by the higher income groups of the professions of medicine and law.

The differences between students from high and low income families can be seen more sharply by examining "typical" students from the lowest and highest income groups.

Student from a Low Income Family

The student from a low income family is likely to come from a rural home on a farm or in the open country. Although he received good grades in high school, he may be an "over achiever," since he had slightly lower achievement test scores than his college classmates. He did not achieve quite as many non-academic accomplishments as his classmates.

The student from a low income home, whose academic performance possibly attracted the attention of his high school teachers, was more often influenced by a teacher in his choice of college. His choice of school was considerably influenced by its low cost, its proximity to his home, and, in some cases, its offer of financial aid.

He was not greatly concerned about social opportunities at the college, nor was he interested in fraternities or sororities, since he does not plan to live in one anyway. He is more likely to plan to live

in a dormitory or at home. He doesn't expect to bring a car to campus, and he expects to work while he is going through college. In spite of the hours involved in work, he hopes to participate in about as many extra-curricular activities as his classmates. He is slightly less likely to expect to participate in intercollegiate athletics and student government. He also dates less, and is going steady less often.

The low income student is most likely to want to enter a social, religious, or educational field and to choose a corresponding major. He plans a career in administrative, political, or persuasive fields less frequently than his classmates. He is more likely to want to be a teacher or therapist. He seeks vocational or professional training from attending college. He is more likely to choose a semi-professional level within those fields, however, as suggested by his educational plans. He is also more likely to expect to stop attending college short of a bachelor's degree and is less likely to expect to go on for professional level post-graduate training. He is especially less likely to plan to enter the legal and medical professions.

The Student from a High Income Family

The student from a high income family usually comes from a home in the city or suburbs. In high school he received moderately good grades, and has moderately high achievement scores. He tends to have shown slightly more achievement in non-academic areas than his classmates.

In his choice of college, the student from a high income home

was concerned neither with its cost nor its proximity to his home. He was more influenced than his classmates by the social opportunities on campus and the presence of fraternities or sororities, since he (or she) plans to live in a fraternity, sorority, or dormitory. His choice of college was frequently influenced by a campus visit or tour. He expects to bring a car to campus and does not expect to work. He also expects to participate in many extracurricular activities, being more likely than his classmates to expect to participate in intercollegiate athletics and student government. He usually dates more than one person and is more likely to be pinned or to be going steady. Very few do not date at all.

While choosing many vocations, he is more likely to choose an occupation in the administrative, political, or persuasive area and to choose a corresponding major. He is slightly less likely to choose social, religious, or educational vocations or to plan majors in those fields. He seldom expects to stop short of a bachelor's degree and is more likely than his classmates to aspire to an advanced degree, especially as a doctor or lawyer. While he is often concerned with obtaining vocational or professional training from his college career, he also wishes to develop his intellect and, in some cases, become a cultured person.

Discussion

These results are similar to those of other studies. As Clark (1964) points out, social class affects the kind of college which students attend and is one of the influences on the kind of subcultures which form

on college campuses. Students from homes with differing incomes differ in choice of major field and vocation, goals in college, and kinds of college experiences they anticipate. These differences will most probably affect the kind of college career students will experience. Students from low income homes are probably more likely to become involved in a "vocational" subculture (Clark and Trow, 1966), thereby experiencing a slightly less stimulating and enriching college career.

These results also have implications for financial aid programs. First, many more students from low income families than high income families report that an offer of financial aid influenced their choice of college. Many more students from low income families also report that their choice was influenced by the low cost of the college and by its proximity to their home. Many students from low income homes probably could not attend college at all without some kind of financial assistance; often they must limit their choices to colleges which have low tutition and are close to their homes. A program of financial aid could, therefore, first help low income students attend college and then widen their choice of institutions. In this way, they could select colleges which more efficiently met their needs or which had special curricula which would aid their vocational development (see Charters, 1963).

Secondly, about three-fourths of the students from the lowest income group expect to work to support themselves in college. For some students the time and energy spent in working might be spent more constructively in study, social activities, or extracurricular

activities. Here then is another service which aid programs can perform. They could relieve some students of the necessity of excessive work loads and thereby enrich their total college experience.

Finally, low income students are twice as likely to plan some educational attainment less than a bachelor's degree and a third as likely to plan an advanced professional level degree (Ph. D., M. D., L. L. B., etc.). By reducing the financial burden of students, financial aid programs could help students from low income homes obtain a level of education more commensurate with their ability and interest.

A financial aid program can do more than simply increase a student's chances to attend college. It also can widen his choice of colleges and programs, allow him to plan a higher level of education, and, perhaps most important, free him to participate more fully in the college experience.

References

American College Testing Program. ACT technical report. Iowa City: Author, 1965.

American College Testing Program. College student profiles: norms for the ACT assessment. Iowa City: Author, 1966.

Astin, A. W. Socio-economic factors in the achievements and aspirations of the merit scholar. Personnel and Guidance Journal, 1964, 42, 581-586. (a)

Astin, A. W. Personal and environmental factors associated with college dropouts among high aptitude students. Journal of Educational Psychology, 1964, 55, 219-227. (b)

Brookover, W. B. A sociology of education. New York: American Book Company, 1955.

Charters, W. W., Jr. The social background of teaching. In N. L. Gage (Ed.), Handbook of research on teaching. Chicago: Rand McNally, 1963. Pp. 715-813.

Clark, B. R. Sociology of education. In R. E. L. Faris (Ed.), Handbook of modern sociology. Chicago: Rand McNally, 1964. Pp. 734-769.

Clark, B. R. & Trow, M. The organizational context. In T. M. Newcomb and E. K. Wilson (Eds.), College peer groups. Chicago: Aldine, 1966. Pp. 17-70.

Davidsen, O. M. Reliability of self-reported high school grades. Unpublished research report, American College Testing Program, 1963.

Davis, J. A. Great aspirations. Chicago: Aldine, 1964.

Havighurst, R. J. & Neugarten, Bernice L. Society and education. Boston: Allyn and Bacon, 1957.

Hays, W. L. Statistics for psychologists. New York: Holt, Rinehart, and Winston, 1963.

Holland, J. L. & Richards, J. M., Jr. Academic and non-academic accomplishments: correlated or uncorrelated? Journal of Educational Psychology, 1965, 56, 165-175.

Holland, J. L. & Richards, J. M., Jr. Academic and non-academic achievement in a representative sample from a population of 612,000. ACT Research Report No. 12. Iowa City: American College Testing Program, 1966.

Werts, C. E. Social class and initial career choice of college freshmen. Sociology of Education, 1966, 39, 74-85. (a)

Werts, C. E. Career choice patterns: ability and social class. NMSC Research Reports, 1966, 2, No. 3. (b)

ACT Research Reports

This report is the seventeenth in a series published by the Research and Development Division of American College Testing Program. Reports are published monthly and mailed free of charge to educators and other interested persons who have asked to be on the special research report mailing list.

The research reports have been deposited with the American Documentation Institute, ADI Auxiliary Publications Project, Photoduplication Service, Library of Congress, Washington 25, D. C. (ADI Document numbers and prices are given below.) Printed copies may be obtained free from the Research and Development Division, American College Testing Program. Photocopies and 35 mm. microfilms may be obtained at cost from ADI by citing ADI Document number. Advance payment is required. Make checks or money orders payable to: Chief, Photoduplication Service, Library of Congress.

Reports in the series are:

*No. 1 A Description of American College Freshmen, by C. Abe, J. L. Holland, Sandra W. Lutz, & J. M. Richards, Jr. (ADI Doc. 8554; photo, $8.75; microfilm, $3.00)

*No. 2 Academic and Non-academic Accomplishment: Correlated or Uncorrelated? by J. L. Holland, & J. M. Richards, Jr. (ADI Doc. 8555; photo, $3.75; microfilm, $2.00)

No. 3 A Description of College Freshmen: I. Students with Different Choices of Major Field, by C. Abe., & J. L. Holland (ADI Doc. 8556; photo, $7.50; microfilm, $2.75)

*No. 4 A Description of College Freshman: II. Students with Different Vocational Choices, by C. Abe., & J. L. Holland (ADI Doc. 8557; photo, $7.50; microfilm, $2.75)

*No. 5 A Description of Junior Colleges, by J. M. Richards, Jr., Lorraine M. Rand, & L. P. Rand ADI Doc. 8558; photo, $3.75; microfilm, $2.00)

No. 6 Comparative Predictive Validities of the American College Tests and Two Other Scholastic Aptitude Tests, by L. Munday (ADI Doc. 8559; photo, $2.50; microfilm, $1.75)

---

*This report now available only from ADI.

ACT Research Reports (cont.)

No. 7 The Relationship Between College Grades and Adult Achievement. A Review of the Literature, by D. P. Hoyt
(ADI Doc. 8632; photo, $7.50; microfilm, $2.75)

No. 8 A Factor Analysis of Student "Explanations" of Their Choice of a College, by J. M. Richards, Jr., & J. L. Holland
(ADI Doc. 8633; photo, $3.75; microfilm, $2.00)

No. 9 Regional Differences in Junior Colleges, by J. M. Richards, Jr., L. P. Rand, & Lorraine M. Rand
(ADI Doc. 8743; photo, $2.50; microfilm, $1.75)

No. 10 Academic Description and Prediction in Junior Colleges, by D. P. Hoyt, & L. Munday
(ADI Doc. 8856; photo, $3.75; microfilm, $2.00)

No. 11 The Assessment of Student Accomplishment in College, by J. M. Richards, Jr., J. L. Holland, & Sandra W. Lutz
(ADI Doc. 8955; photo, $3.75; microfilm, $2.00)

No. 12 Academic and Non-academic Accomplishment in a Representative Sample taken from a Population of 612,000, by J. L. Holland, & J. M. Richards, Jr.
(ADI Doc. 8992; photo, $3.75; microfilm, $2.00)

No. 13 The Prediction of Student Accomplishment in College, by J. M. Richards, Jr., J. L. Holland, & Sandra W. Lutz
(ADI Doc. 9020; photo, $5.00; microfilm, $2.25)

No. 14 Changes in Self-Ratings and Life Goals Among Students at Colleges with Different Characteristics, by R. W. Skager, J. L. Holland, & L. A. Braskamp
(ADI Doc. 9069; photo, $3.75; microfilm, $2.00)

No. 15 Can Computers Write College Admissions Test? , by J. M. Richards, Jr.
(ADI Doc. 9174; photo, $2.50; microfilm, $1.75)

No. 16 Changes in Self-Ratings and Life Goals as Related to Student Accomplishment in College, by R. W. Skager, & L. A. Braskamp
(ADI Doc. 9214; photo, $2.50; microfilm, $1.75)